

What is claimed is:

1. An Event Reporting system for requesting and processing a report on an Event that occurs upon a use of
5 a digital item, comprising:

an Event Report Request data processing means for creating an Event Report Request data which requests a report on an Event Report data; and

10 an Event Report data processing means for creating and transmitting an Event request in response to the Event Report Request data transmitted from the Event Report Request data processing means to perform an Event Reporting.

15 2. The system as recited in claim 1, wherein the Event Report Request data processing means includes:

an Event Report Request data creating means for creating an Event Report Request data;

20 an Event Report Request data transmitting means for transmitting the Event Report Request data created in the Event Report Request data creating means;

an Event Report Request data receiving means for receiving the Event Report Request data;

25 an Event Report Request data analyzing means for analyzing the Event Report Request data received in the Event Report Request data receiving means; and

a monitoring means for monitoring whether or not an Event occurs.

30 3. The system as recited in claim 1, wherein the Event Report data processing means includes:

an Event Report data creating means for creating an Event Report data;

35 an Event Report data transmitting means for transmitting the Event Report data created in the Event

Report data creating means;

an Event Report data receiving means for receiving the Event Report data; and

an Event Report data analyzing means for analyzing
5 the Event Report data received in the Event Report data receiving means.

4. The system as recited in claim 3, wherein the Event Report Request data includes:

10 a descriptor for describing characteristics of the Event Report Request data;

an Event Report descriptor for describing characteristics that an Event Report data to be generated by the current Event Report Request data should have and
15 Event Report data; and

an Event condition descriptor for specifying and describing conditions which becomes a standard for occurrence of an Event.

20 5. The system as recited in claim 4, wherein the descriptor includes:

lifetime indicating remaining lifetime of the Event Report Request data;

history indicating information on history of creating
25 or modifying the Event Report Request data or the Event Report data; and

priority indicating a priority order of processing Event Report Request data.

30 6. The system as recited in claim 5, wherein the lifetime includes:

a starting time of valid lifetime of the Event Report Request data; and

an ending time of the valid lifetime of the Event
35 Report Request data.

7. The system as recited in claim 5, wherein the history includes:

creation information for describing a history of
5 creating an Event Report Request data or a Event Report data; and

modification information for modifying a history of
modifying an Event Report Request data or a Event Report data.

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8. The system as recited in claim 7, wherein the history includes:

peer information which is a unique identifier of a
peer that performs creation or modification;

15 user information which is a unique identifier of a
user that performs creation or modification;

time information at which an Event Report Request
data or an Event Report data is created or modified; and

20 description information for indicating operation of
the peer that creates or modifies the Event Report Request
data or Event Report data.

9. The system as recited in claim 5, wherein the
priority has a value from 0 to 5 and the lower the number
25 is, the higher the priority is.

10. The system as recited in claim 9, wherein, if a
priority level is not specified, the priority is
considered to have a priority of a level 2.

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11. The system as recited in claim 4, wherein the
ER descriptor includes:

identification information of the Event Report data;

35 access control information for describing a peer or a
user that can access to the Event Report data;

Event Report data for describing report data requested by the Event Report Request data;

an embedded Event Report Request data for indicating another Event Report Request data which is enclosed for
5 acknowledgement or forwarding; and

transmission parameters for describing information related to transmission of the Event Report data.

12. The system as recited in claim 11, wherein the
10 Event Report data includes at least one among a peer, a user, a reference digital item (RefDI) and location.

13. The system as recited in claim 11, wherein the Event Report data include:

15 peer identification information for creating an Event Report data;

user identification information for creating an Event Report data;

time information when the Event occurs;

20 location information of the peer;

identification information of a digital item which is an object of Event occurrence;

digital item identification information related to the current Event Report data; and

25 operation information describing operations related to the use of a digital item.

14. The system as recited in claim 11, wherein the transmission parameters include:

30 receiver information to whom the Event Report data is transmitted; and

transmission time information describing time at which the Event Report data is authored and transmitted.

35 15. The system as recited in claim 14, wherein the

transmission time information includes specific time information at which the Event Report data is to be transmitted, elapsed time information, and periodic time information.

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16. The system as recited in claim 15, wherein the specific time information includes information requesting to transmit the Event Report data at least one time among at a specific time, after the specific time, and between
10 specific time and time.

17. The system as recited in claim 15, wherein the elapsed time information requests to transmit the Event Report data at least one time among at an elapsed time,
15 before the elapsed time, and between elapsed time and time.

18. The system as recited in claim 15, wherein the periodic time information includes:
a starting time of periodic transmission;
20 an interval time between periods;
a period continuing time; and
an ending time of the periodic transmission.

19. The system as recited in claim 4, wherein the
25 Event condition descriptor includes:
a timing-based condition for describing time on the peer's part where an Event occurs based on time when an Event Report Request data is received;
a digital item usage-based condition for describing
30 an Event that occurs in connection with use of a digital item; and
a peer operation-based condition for describing an Event regardless of the use of the digital item.

35 20. The system as recited in claim 19, wherein the

timing-based condition includes specific time, elapsed time and periodic time.

21. The system as recited in claim 19, wherein the digital item usage-based condition uses terms defined in ISO/IEC 21000-6 Rights Data Dictionary (RDD).

22. The system as recited in claim 19, wherein the peer operation-based condition describes the operation of a peer or a status of a device.

23. The system as recited in claim 19, wherein the Event condition descriptor is expressed by a combination of conditions.

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24. The system as recited in claim 23, wherein the combination of conditions uses external operators and internal operators stated in Tables 1 and 2, which are shown as:

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Table 1

Logical Operator	AND, OR, XOR, NOT
Parentheses	(,)
Location	PREFIX, POTFIX

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Table 2

Comparison Operator	=, <, >, <=, <>, >, >=
Arithmetic Operator	+, -, *, /, %, ^
Location	PREFIX, INFIX, POSTFIX

25. The system as recited in claim 19, wherein the timing-based condition is formed of operators expressing a relationship between a timing Event and an Event;

the digital item usage-based condition is formed of

operators expressing a relationship between an operation Event and an Event; and

the peer operation-based condition is formed of operators expressing a relationship between an condition
5 and an Event.

26. The system as recited in claim 3, wherein the Event Report data includes:

an Event Report descriptor for describing information
10 related to creation and transmission of the Event Report data;

an original Event Report Request data for describing a reference for the Event Report Request data which makes the Event Report data to be created; and

15 an Event Report data including report data of the Event Report data.

27. The system as recited in claim 26, wherein the Event Report data further includes an embedded Event
20 Report Request data for describing another Event Report Request data or another Event Report data which is enclosed to the Event Report data for acknowledgement or forwarding.

25 28. The system as recited in claim 27, wherein the Event Report descriptor includes:

description for describing other data related to the Event Report data in a free form;

status information for describing whether the Event
30 Report data is created and transmitted normally; and

creation information for describing information related to creation of the Event Report data.

29. An apparatus for requesting a report for an
35 Event that occurs upon a use of a digital item to perform

Event Reporting, comprising:

an Event Report Request data creating means for creating an Event Report Request data in response to an Event Report Request data requested and received by a user;

an Event Report Request data transmitting means for transmitting the Event Report Request data created in the Event Report Request data creating means;

an Event Report Request data receiving means for receiving the Event Report Request data;

an Event Report Request data analyzing means for analyzing the Event Report Request data received in the Event Report Request data receiving means; and

a monitoring means for monitoring whether or not an Event occurs.

30. The apparatus as recited in claim 29, wherein the Event Report Request data includes:

a descriptor for describing characteristics of the Event Report Request data;

an Event Report descriptor for describing characteristics that an Event Report data to be generated by the current Event Report Request data should have and Event Report data; and

an Event condition descriptor for specifying and describing conditions which becomes a standard for occurrence of an Event.

31. The apparatus as recited in claim 30, wherein the descriptor includes:

lifetime indicating remaining lifetime of the Event Report Request data;

history indicating information on history of creating or modifying the Event Report Request data or the Event Report data; and

priority indicating a priority order of processing
Event Report Request data.

32. The apparatus as recited in claim 30, wherein
5 the Event Report descriptor includes:

identification information of the Event Report data;
access control information for describing a peer or a
user that can access to the Event Report data;

Event Report data for describing report data
10 requested by the Event Report Request data;

an embedded Event Report Request data for indicating
another Event Report Request data which is enclosed for
acknowledgement or forwarding; and

transmission parameters for describing information
15 related to transmission of the Event Report data.

33. The apparatus as recited in claim 30, wherein
the Event condition descriptor includes:

a timing-based condition for describing time on the
20 peer's part where an Event occurs based on time when an
Event Report Request data is received;

a digital item usage-based condition for describing
an Event that occurs in connection with the use of a
digital item; and

25 a peer operation-based condition for describing an
Event that occurs regardless of the use of the digital
item.

34. The apparatus as recited in claim 29, wherein
30 the Event Report data includes:

an Event Report descriptor for describing information
related to creation and transmission of the Event Report
data;

an original Event Report Request data for describing
35 a reference for the Event Report Request data which makes

the Event Report data to be created; and

Event Report data including report data of the Event Report data.

5 35. The apparatus as recited in claim 34, wherein the Event Report data further includes an embedded Event Report Request data for describing another Event Report Request data or another Event Report data which is enclosed to the Event Report data for acknowledgement or
10 forwarding.

 36. The apparatus as recited in claim 34, wherein the Event Report descriptor includes:
description for describing other data related to the
15 Event Report data in a free form;
status information for describing whether the Event Report data is created and transmitted normally; and
creation information for describing information related to creation of the Event Report data.

20 37. An apparatus for reporting an Event that occurs upon a use of a digital item to perform Event Reporting, comprising:
an Event Report data creating means for creating an
25 Event Report data;
an Event Report Request data transmitting means for transmitting the Event Report Request data created in the Event Report Request data creating means;
an Event Report data receiving means for receiving
30 the Event Report data; and
an analyzing means for analyzing the Event Report data received in the Event Report data receiving means.

 38. The apparatus as recited in claim 37, wherein
35 the Event Report data includes:

an Event Report descriptor for describing information related to creation and transmission of the Event Report data;

an original Event Report Request data for describing
5 a reference for the Event Report Request data which makes the Event Report data to be created; and

an Event Report data including report information of the Event Report data.

10 39. The apparatus as recited in claim 38, wherein the Event Report data further includes an embedded Event Report Request data for describing another Event Report Request data or another Event Report data which is enclosed to the Event Report data for acknowledgement or
15 forwarding.

40. The apparatus as recited in claim 38, wherein the Event Report descriptor includes:

description for describing other data related to the
20 Event Report data in a free form;

status information for describing whether the Event Report data is created and transmitted normally; and

creation information for describing information related to creation of the Event Report data.

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41. A method for reporting an Event that occurs upon a use of a digital item to perform Event Reporting, comprising:

a) an Event Report Request data processing step of
30 creating and transmitting an Event Report Request data requesting a report on an Event, and receiving, analyzing and transmitting an Event Report Request data from outside and monitoring an Event corresponding to the Event Report Request data; and

35 b) an Event Report data processing step of creating

and transmitting the Event Report data created to perform Event Reporting corresponding to the transmitted Event Report Request data, and analyzing and transmitting the Event Report data transmitted from outside.

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42. The method as recited in claim 41, wherein the a) Event Report Request data processing step includes the steps of:

- 10 a1) creating the Event Report Request data;
- a2) transmitting the Event Report Request data;
- a3) receiving the Event Report Request data;
- a4) analyzing the Event Report Request data; and
- a5) monitoring whether or not an Event occurs.

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43. The method as recited in claim 41, wherein the b) Event Report data processing step includes the steps of:

- b1) generating the Event Report data;
- b2) transmitting the Event Report data;
- 20 b3) receiving the Event Report data; and
- b4) analyzing the Event Report data.

44. The method as recited in claim 41, wherein the Event Report Request data includes:

25 a descriptor for describing characteristics of the Event Report Request data;

an Event Report descriptor for describing characteristics that an Event Report data to be generated by the current Event Report Request data should have and
30 Event Report data; and

an Event condition descriptor for specifying and describing conditions which becomes a standard for occurrence of an Event.

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45. The method as recited in claim 44, wherein the

descriptor includes:

lifetime indicating remaining lifetime of the Event Report Request data;

5 history indicating information on history of creating or modifying the Event Report Request data or the Event Report data; and

priority indicating a priority order of processing Event Report Request data.

10 46. The method as recited in claim 44, wherein the Event Report descriptor includes:

identification information of the Event Report data;

access control information for describing a peer or a user that can access to the Event Report data;

15 Event Report data for describing report data requested by the Event Report Request data;

an embedded Event Report Request data for indicating another Event Report Request data which is enclosed for acknowledgement or forwarding; and

20 transmission parameters for describing information related to transmission of the Event Report data.

47. The method as recited in claim 44, wherein the Event condition descriptor includes:

25 a timing-based condition for describing time on the peer's part where an Event occurs based on time when an Event Report Request data is received;

a digital item usage-based condition for describing an Event that occurs in connection with the use of a digital item; and

30 a peer operation-based condition for describing an Event regardless of the use of the digital item.

48. The method as recited in claim 41, wherein the Event Report data includes:

an Event Report descriptor for describing information related to creation and transmission of the Event Report data;

an original Event Report Request data for describing
5 a reference for the Event Report Request data which makes the Event Report data created; and

an Event Report data including report information of the Event Report data.

10 49. The method as recited in claim 48, wherein the Event Report data further includes an embedded Event Report Request data for describing another Event Report Request data or another Event Report data which is enclosed to the Event Report data for acknowledgement or
15 forwarding.

50. The method as recited in claim 49, wherein the Event Report descriptor includes:

description for describing other data related to the
20 Event Report data in a free form;

status information for describing whether the Event Report data is created and transmitted normally; and

creation information for describing information related to creation of the Event Report data.

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51. An Event Report Request data which is used for requesting a report on an Event that occurs upon a use of a digital item to perform Event Reporting, comprising:

a descriptor for describing characteristics of the
30 Event Report Request data;

an Event Report descriptor for describing characteristics that an Event Report data to be generated by the current Event Report Request data should have and Event Report data; and

35 an Event condition descriptor for specifying and

describing conditions which become a standard for occurrence of an Event.

52. The Event Report Request data as recited in claim 51, wherein the descriptor includes:

lifetime indicating remaining lifetime of the Event Report Request data;

history indicating information on history of creating or modifying the Event Report Request data or the Event Report data; and

priority indicating a priority order of processing Event Report Request data.

53. The Event Report Request data as recited in claim 51, wherein the Event Report descriptor includes:

identification information of the Event Report data;

access control information for describing a peer or a user that can access to the Event Report data;

Event Report data for describing report data requested by the Event Report Request data;

an embedded Event Report Request data for indicating another Event Report Request data which is enclosed for acknowledgement or forwarding; and

transmission parameters for describing information related to transmission of the Event Report data.

54. The Event Report Request data as recited in claim 51, wherein the Event condition descriptor includes:

a timing-based condition for describing time on the peer's part where an Event occurs based on time when an Event Report Request data is received;

a digital item usage-based condition for describing an Event that occurs in connection with use of a digital item; and

a peer operation-based condition for describing an

Event regardless of the use of the digital item.

55. An Event Report data which is used to provide information corresponding to an Event Report Request data to perform Event Reporting on an Event that occurs upon a use of a digital item, comprising:

an Event Report descriptor for describing information related to creation and transmission of the Event Report data;

an original Event Report Request data for describing a reference for the Event Report Request data which makes the Event Report data created; and

an Event Report data including report information of the Event Report data.

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56. The Event Report data as recited in claim 55, wherein the Event Report data further includes an embedded Event Report Request data for describing another Event Report Request data or another Event Report data which is enclosed to the Event Report data for acknowledgement or forwarding.

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57. The Event Report data as recited in claim 55, wherein the Event Report descriptor includes:

description for describing other data related to the Event Report data in a free form;

status information for describing whether the Event Report data is created and transmitted normally; and

creation information for describing information related to creation of the Event Report data.

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58. A computer-readable recording medium for recording a program that implements an Event Reporting method in a system for requesting and processing a report on an Event that occurs upon a use of a digital item, the

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method comprising the steps of:

a) creating and transmitting an Event Report Request data requesting a report on an Event, and receiving, analyzing and transmitting an Event Report Request data
5 from outside, and monitoring an Event corresponding to the Event Report Request data; and

b) creating and transmitting the Event Report data created to perform Event Reporting corresponding to the transmitted Event Report Request data, and analyzing and
10 transmitting the Event Report data transmitted from outside.